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- AN - 1986-216851 [25]
- TI - Biotin determin. - using labelled avidin and immobilised biotinised protein
- AB - J61149863 Method of determining biotin which comprises adding a sample liq. contg. biotin and a labelled avidin in an immobilised biotinised protein, measuring the activity of the labelled matter bound with the biotinised protein, and comparing it with that of a standard liq.
- A claimed reagent for determining biotin comprises containing labelled avidin and immobilised biotinised protein.
- Labelled avidin used in the method is formed by labelling basic albumin-like crystalline protein contained in domestic fowl white by peroxidase, beta-galactosidase, etc. Biotinisation of protein (e.g. albumin, globulin, etc.) is carried out by treating biotin derivative (e.g. N-hydroxysuccinimidobiotin) and protein in a solvent. The weight ratio of biotin derivative to protein is 1:1 to 1:20, pref. near 1:5. The immobilisation of the biotinised protein e.g. biotinised polylysine is pref. carried out under the conditions of 40-50 deg.C, 30-60 mins. and 0.05-1.0% concn. of polylysine. The concn. of labelled avidin added is 10-1000 ng/ml, pref. 20-100 ng/ml.
- ADVANTAGE - The amt. of sample liq. can be about 1/50 time that in microbiological determining method and also the time required for the determination can be shortened 5 hrs. in contrast with 24-72 hrs. in the microbiological method. As the determining procedures are very simple, a large number of samples can be determined at a time. Esp. advantageously used in the case of determining biotin in blood or urine.
- W - BIOTIN DETERMINE LABEL AVIDIN IMMOBILISE PROTEIN
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